

Listing of claims:

Claim 1 is cancelled.

Claim 2 is cancelled.

3. (First amended) A chip of claim 33 in which said light source is an electro-luminescent material.

4. (First amended) A chip of claim 33 in which said light source is an organic electro-luminescent material.

5. (First amended) A chip of claim 33 in which said light source is an inorganic electro-luminescent] material.

6. (First amended) A chip of claim 33 in which said light source is connected by conductive electrodes.

7. (First amended) A chip of claim 33 in which said optical detector is a semi-conducting material.

8. (First amended) A chip of claim 33 in which said optical detector is composed of amorphous silicon.

9. (First amended) A chip of claim 33 in which said optical detector is tuned to respond to a specific wavelength range of light.

10. (First amended) A chip of claim 33 with multiple optical detectors in which each of said optical detectors is tuned to a different wavelength range of light.

11. (First amended) A chip of claim 33 with multiple optical detectors in which each of said optical detectors

is tuned to a different wavelength range of light and the output of these optical detectors produces a spectra.

Claim 12 is cancelled.

13. (First amended) A chip of claim 33 in which each of said sensors is coupled to a bioactive material.

14. (First amended) A chip of claim 33 in which each of said sensors is coupled to a protein.

15. (First amended) A chip of claim 33 in which each of said sensors is coupled to an antibody.

16. (First amended) A chip of claim 33 in which each of said sensors is coupled to a fluorescence-labeled antibody.

17. (First amended) A chip of claim 33 in which each of said sensors is coupled to an organic dye.

18. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous gel.

19. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous gel doped with an organic dye.

20. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous gel doped with either a protein or an enzyme.

21. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous gel containing an antibody.

22. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous gel encapsulating a living cell.
23. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel.
24. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel doped with an organic dye.
25. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel doped with a protein or an enzyme.
26. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel containing an antibody.
27. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel encapsulating a living cell.
28. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel micro-sphere.
29. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel micro-sphere doped with an organic dye.

30. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel micro-sphere doped with a protein or enzyme.

31. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel micro-sphere containing an antibody.

32. (First amended) A chip of claim 33 in which each of said sensors is coupled to a porous silica gel micro-sphere encapsulating a living cell.

33. A chip comprising a plurality of sensors each of which contains at least one light source and at least one optical detector.